SUMMARY OF WORKSHOP 5

CONTENTS

SECTION I:
INTRODUCTION AND BACKGROUND

Meeting Purpose and Goals

On February 26, 1996, the CALFED Bay-Delta Program held its fifth public workshop at the Beverly Garland Hotel in Sacramento. Three primary goals were set for the workshop. The first goal was to inform participants about the overall Phase I project plan of action and present a list of 20 alternative management plans for the Bay-Delta CALFED has generated based on information from previous workshops. The second goal was to generate participant input on the 20 alternatives during facilitated small group discussions. The third goal was to receive comments and suggestions from stakeholders on the process by which alternatives are developed and refined. Stakeholder input is critical for refining the alternatives and generating a shorter list of alternatives to by analyzed during the Project's second phase -- preparation of a programmatic EIR/EIS --scheduled to begin during the summer of 1996.

Workshop Agenda

The workshop agenda was organized into four main sections. During the first section, Overview of Alternatives, Lester Snow summarized the alternative generation process and introduced the continuum of alternative solutions. This was followed by a Panel Discussion in which panelists addressed the set of draft alternatives before receiving questions and comments from the moderator and participants. Panelists included Gary Bobker, Pete Rhoades, Adrienne Alvord, Nat Bingham, Richard Denton, B.J. Miller, Tom Zuckerman, and Jeff Jaraczeski. During the third session, participants divided into smaller breakout groups. Participants were randomly assigned to breakout groups as they arrived and were handed colored dots with their name tags. The dots corresponded to the five group referred to in this summary: blue, green, orange, red, and yellow. Participants reconvened for the concluding plenary session, in which key themes discussed by the breakout groups were reported back to the full group.

Workshop Participants

Approximately 180 people attended the workshop, and participants represented a wide range of public and private interests. State and federal resource management agencies, CALFED Program staff, regional and local utility districts, Delta and Central Valley water and irrigation districts, regional urban water districts, local and regional governments, farming and agricultural interests, power companies, environmental groups, and private consultants were represented.

Format of the Report

This report is divided into three sections. Section I, Introduction and Background, describes the workshop purpose and goals, agenda and participants. Section II, Summary of Comments on Alternatives and Process of Refining Alternatives, summarizes each group's assessment of the strengths and weakness of each of the three categories of alternatives. This section also includes a summary of the participants' comments on two aspects of the Phase I -- the adequacy of the range of alternatives under consideration and advice for CALFED staff to consider in further refinement of the alternatives.

SECTION II:
SUMMARY OF COMMENTS ON ALTERNATIVES AND PROCESS OF REFINING ALTERNATIVES

Introduction to the Three Categories of Alternatives

To help workshop participants discuss the wide range of alternatives, the alternatives were divided into three categories for presentation at the workshop. The first category included eleven alternatives that emphasize system reoperation. The second category contained six alternatives which emphasize a balance between reoperation and restructuring. Finally, the third category includes three alternatives that emphasize restructuring.

Comments on the Three Categories of Alternatives

A wide range of responses was recorded to the core questions staff posed about strengths and weaknesses of alternatives and categories of alternatives.

As part of this discussion, participants in break out sessions weighed in with several comments on the breadth of core elements. One group suggested a supplemental category of activities, or "essential elements." One recurring comment, articulated by a range of interest group representatives, was the need to include more aggressive demand management as a core action. Another action that was mentioned repeatedly was the need for a high core level of habitat protection. Some, but not all participants who raised this concern also suggested that habitat restoration (and not just conservation) should be included as a consistent core element.

Many participants wanted to know more about the linkage between actions before endorsing or critiquing particular alternatives. In addition, before weighing in with support or critiques of alternatives, participants expressed interest in knowing how alternatives would affect water deliveries, whether they would generate offsite or third party impacts, how much they would cost, and how costs will be allocated.

Two countervailing comments were expressed regarding Category I. On the one hand, Category I was characterized as most likely to be implemented, since it involved the fewest dramatic changes to the existing system. On the other hand, many expressed doubts that Category I alternatives could really meet the full range of solution principles. Category II had a large number of positive comments, as well as suggestions for inclusion of additional specific elements.

Some commentators favored Category III as taking the bold steps needed to address the goals of the CALFED programs. Others characterized Category III alternatives, with their emphasis on new facilities, as "tending to be too costly." (No cost estimates were presented in Workshop 5.)

For all categories of alternatives, participants stressed the need to develop guarantees, assurances, or other institutional arrangements to complement the more physical descriptions of actions contained in the document.

Summary of Comments on the Three Categories of Alternatives from Breakout Groups

Category I - Strengths and Weaknesses

Strengths

Blue Category I features a good mix of actions with emphasis on ecological restoration, demand management, and low cost. Participants in the group also noted that this category of alternatives would also be the easiest to permit.

Green Discussion focused on storage and releases. The reoperation program allows for intelligent shifting of exports and is in keeping with the management objectives. The tie-in to conjunctive uses makes the most of reoperation. Real time monitoring in this program allows for adaptations. This category is also the cheapest and makes the most of existing facilities.

Orange The aggressive demand side management is a plus in this category of alternatives. The solution should maximize implementation of demand side management. It incorporates the breadth of core actions.

Red This set of alternatives retains an in-Delta storage element which is critical to the meet water quality standards. This also allows for Endangered Species Act needs to be met in the future. The ecosystem quality side of the alternatives is strong.

Yellow Participants in this group expressed approval of the following aspects of Category I alternatives: avoiding an isolated facility; remaining with the current pool; affordability and flexibility of adaptive management; emphasis on restoring Delta and Sacramento river habitat; promotion of water banking and reuse; emphasis on restoring the levee system; and political feasibility.

Weaknesses

Blue This group listed weaknesses of Category I alternatives as: doesn't address ecosystem need enough; definition of shallow water habitat is too narrow; focus should be increased to upstream watershed to increase incremental gains; the assumption that additional in-Delta storage is needed may be faulty.

Green Shortcomings in drinking water quality and supply were noted. Alternatives with reoperation appear to limit exports, while to environmental interests it looked like more exports would be taken from the Delta.

Orange Two areas of weakness in this set of alternatives were discussed: the range of demand management/alternate supply options needs is not wide enough; the restoration actions should be improved, particularly in the "low end" restoration alternatives.

Red This group focused on the negative impacts of not developing upstream and downstream storage facilities. Also, difference in levels of ecological restoration between alternatives was noted.

Yellow Weaknesses identified by participants in this group were: lack of flexibility in levee management; limitations in conjunctive use in current alternatives; too much reliance on "real time management"; limited scope of alternatives for habitat improvements; and dislike of screening diversions and a reduction in net water availability.

Category II - Strengths and Weaknesses

Strengths

Blue This group considered the increase in upstream storage, the effects on water quality, and the spectrum of activities as strengths.

Green Strengths noted by this group were: small isolated facility good for M&I uses, upstream storage, conjunctive use and groundwater storage; in-

Delta storage provides beneficial use of the islands, and ability to accomodate Sacramento flood flows.

Orange No comments regarding the strengths of Category II were noted.

Red There was general agreement in this group that the additional storage described in Category II is needed. Participants commented favorably on two alternatives in particular: Alternatives 14 & 15 -- water quality and water transfers.

Yellow In this group, the ability of alternatives to meet future demands and growth with expanded facilities was listed as a strength. Participants noted that this "split system" has the greatest flexibility in the event of encroachment of exotic species. Some members of this group liked isolated conveyance, but others did not.

Weaknesses

Blue Members of this group listed the following as weaknesses of Category II alternatives: does not address bromide in the Delta; should consider storage upstream; relies heavily on water purchase; lacking commitment in ecosystem improvements.

Green This group noted that many details about the alternatives in this set were needed before they could be evaluated. Other concerns from members were: the impacts of levee setbacks and meander corridors upon landowners, impacts on water quality in Delta resulting from isolated facilities, the short regulatory "shelf-life" of alternatives, and reliance on levees for system integrity.

Orange The following were listed as weaknesses in Category II alternatives: lack of clarity in controls on the isolated transfer facility, lack of demand side management, lack of priorities for diversion screening, and the use of recycled water in in-Delta facilities has not been explored

Red This group discussed shortcomings in water supply and water quality in Category II alternatives. Two members of the group noted that the Stockton East water problem is not solved. One participant felt that the new reservoir storage should be 3 million acre feet (MAF), not 1 or 2 MAF as described in the alternatives. Another noted that any alternatives that bypass the Delta with good quality water will hurt the quality of water in the Delta.

Yellow Members of this group were critical of the eastside canal because of it's potential to export too much water. This category was described by some as having the "worst of both worlds" -- problems of small split diversions and impact on fisheries and operational headaches. This group also noted long-term levee management plans, upper watershed management plans, guarantees, and a definition of major "plumbing systems" was missing from these alternatives.

Category III - Strengths and Weaknesses

Strengths

Blue Members of this group listed the following as strengths of Category III Alternatives: extensive levee improvements; greatest potential for restoring historic hydrologic flows patterns; offers downstream storage; reliability in terms of water supply and vulnerability; Upper Sacramento River restoration; and technical control.

Green Comments received from this group were: best long-term solution; the new facilities are good; and upstream storage provides flexibility, water supply, water quality, and system vulnerability benefits.

Orange No comments on Category III Strengths were noted by this group.

Red Participants from this group noted that Alternative 20 was good, but could be improved by adding channel capacity improvements. Also the range of alternatives with facilities was considered a strength.

Yellow Strengths of Category III alternatives listed by this group were: recognize the need for high drinking water quality; like offstream storage upstream and downstream of the Delta; a large isolated facility; and the possibility of producing more water.

Weaknesses

Blue — Group members listed the following as weaknesses in Category III alternatives: expensive, conflicts with guarantees for the Delta, abandons premise of conjunctive use and groundwater banking; upstream and downstream storage is not addressed in all alternatives; and the viability of in-delta storage is not confirmed.

Green — Comments received from this group on Category III weaknesses were: the treatment of water banking should be more specific, as assessment of cost must be completed; include more guarantees to protect other uses, or provide sufficient mitigation; needs more new technology such as acoustic barriers, needs more emphasis on real-time monitoring; and needs more emphasis on non-flow problem solutions.

Orange — In discussion of Category III weaknesses, participants listed the following: lack of clarity on the assumptions for delta restoration; some objectives (e.g. 15) are costly and don't meet objectives, lacking demand management side, lack of detail on issues and problems north of Delta; assurances are lacking that address the needs of water users; and the diversity of habitats needs to be more fully developed.

Red — No weaknesses specific to Category III alternatives were listed by this group.

Yellow — Weaknesses in Category III alternatives identified by participants in the yellow group were: lack of institutional protection; doesn't incorporate all essential elements; lack of understanding of biological impacts of building a series of lakes; expensive; water rights issues could delay implementation; the fact that these increase the amount of water available to go south (viewed as a weakness by participant); lack of long term levee management; will increase rates; isolated facility unacceptable; lack of upper watershed management plan; no political support; risk of misuse of facilities; and the irreversible quality of the alternatives.

Comments on the Process of Building and Explaining Alternatives to Date

Comments and Questions relating to the Process of Alternative Development from Breakout Groups

How did staff build up an array of alternatives?

Why are the core actions included in the alternative descriptions?

Core actions should not be repeated in each alternative description, rather, we should refer to them in these descriptions.

With the current organization of alternatives, it is difficult to relate alternatives to one another and to figure their logical relationships. It would be easier to comprehend a tiered or stepwise progression concept of alternatives.

The full range of alternatives was not easy to see because it was difficult to see how the alternatives were put together.

In the summary of alternatives, the "low, moderate, and high" categories are meant to signal the intent of each alternative, they are not a rating system.

CALFED has gone from 100+ alternatives to 20. Could CALFED produce a description of the criteria that were used to narrow the number of alternatives, so that participants can better understand CALFED's interpretation of the criteria?

Questions and Comments on the Clarity of Assumptions and Data Sources Used in Building Alternatives

What assumptions were used in varying the amount of physical habitat among different alternatives?

More work is needed to identify core element details and then to revisit "low, or moderate, or high" goals, and their achievement with respect to resource protection and conflict resolution.

When in the process will hydrologic modeling be done?

We need explicit goals and objectives for design alternatives to be implemented with an adaptive management approach. Quantitative goals and objectives will better enable us to address the conflicts in a climate of uncertainty.

Questions and Comments on the Adequacy of the Breadth of Alternatives

Participants in the break out sessions offered numerous comments and suggestions in response to the question about whether the existing range of alternatives was sufficient. One or more individual commentators recommended that more emphasis be placed on the following actions as the 8-12 alternatives are crafted:

- demand side management
- extent of habitat restoration
- north-of-Delta issues
- tributaries
- in-Delta storage
- water transfers
- aggressive pollutant source control
- intake screening
- program funding
- drinking water quality
- coordination of reservoir releases
- salinity influx controls
- additional storage

All of these items had supporters. Inclusion of more emphasis on north-of-Delta solutions was recommended by several participants as needing more emphasis as the next round of alternatives is developed.

Summary of Comments on Process of Refining Alternatives

Questions and Comments on the Next Steps in Refining Alternatives

Who/or what entities will make the final decision on the core actions that will be either strengthened or eliminated?

How do we get from 20 alternatives to 8 to 12? Are the 20 alternatives "tent stakes" or representatives? Are they the outer edge or the inside?

A summary that characterizes the levels of resource protection benefit and conflict resolution for each alternative will be useful.

An alternative that has only a low level of conflict resolution and resource protection is pretty weak, would not get much stakeholder support, and therefore should be eliminated. Another participant noted: "We need alternatives that are do not cause mutual terror."

We've raised some sub-alternatives in this session. Will staff carry those forward in refining to the 8-12?

Further refinement should be based on considerations such as cost, institutional constraints, and feasibility.

Questions and Comments on the Handling of Public Input

It's too early in the process to give a thoughtful or objective answer as to which alternatives are best.

How much time is there to provide written comments?

What are public participants going to do? Just what is done with input? Why are water transfers a core action when most surveyed BDAC members indicated that it should not be a core action. It is unclear as to how comments are incorporated and how to submit the most effective input.

Will comments received from Delta water agencies, individuals, BDAC members and others get the same consideration as if they had been made at this meeting?

A recurring theme in Workshop 5 was a desire for greater level of detail. In fact, as shown by the questions listed above, this desire for a "higher level of detail" is not just a single concern, but several:

- provide more specificity about assumptions used
- reference important data and information sources consulted and also acknowledge the existence of important data gaps
- provide insight about criteria used to choose among and refine alternatives; show how solution principles were actually used as a yardstick
- provide greater clarity about the linkage between actions
- move towards greater geographic specificity, particularly with reference to mapped information
- assess the cost and financing implications
- identify and document third party and offsite impacts

GLOSSARY OF TERMS

AF Abbreviation for acre feet; the volume of water that would cover one acre to a depth of one foot, or 325,851 gallons of water. On average, could supply 1-2 households with water for a year.

Alternative A collection of actions or action categories assembled to provide a comprehensive solution to problems in the Bay-Delta system.

Action A structure, operating criteria, program, regulation, policy, or restoration activity that is intended to address a problem or resolve a conflict in the Bay-Delta system.

Action Category A set of similar actions. For example, all new or expanded off-stream storage might be placed into a single action category.

Anadromous Fish Fish that spend a part of their life cycle in the sea and return to freshwater streams to spawn.

Best Management Practices (BMP) An urban water conservation measure that the California Urban Water Conservation Council agrees to implement among member agencies.

Central Valley Project A federal water conveyance system that pumps water from the Delta for agricultural, urban domestic, and industrial purposes.

Central Valley Project Improvement Act (CVPIA) This federal legislation, signed into law on October 30, 1992, mandates major changes in the management of the federal Central Valley Project. The CVPIA puts fish and wildlife on an equal footing with agricultural, municipal, industrial, and hydropower users.

CFS An abbreviation for cubic feet per second.

Channel Islands Natural, unleveed land masses within Delta channels. Typically good sources of habitat.

Conjunctive Use The operation of a groundwater basin in combination with a surface water storage and conveyance system. Water is stored in the ground water basin for later use in place of or to supplement surface supplies. Water is stored by intentionally recharging the basin during years of above-average water supply.

Conveyance A pipeline, canal, natural channel or other similar facility that transports water from one location to another.

Delta Islands Islands in the Sacramento-San Joaquin Delta protected by levees. Delta Islands provide space for numerous functions including agriculture, communities, and important infrastructure such as power plants, transmission lines, pipelines, and roadways.

Demand Management Programs that seek to reduce demand for water through conservation, rate incentives, fallowing of agricultural lands, drought rationing, and other activities.

Diversions The action of taking water out of a river system or changing the flow of water in a system for use in another location.

Drought Conditions A time when rainfall and runoff are much less than average. One method to categorize annual rainfall is as follows, with the last two categories being drought conditions: extremely wet, wet, normal, dry, and critically dry.

Ecosystem A recognizable, relatively homogeneous unit that includes organisms, their environment, and all the interactions among them.

Entrainment The process of drawing fish into diversion pumps along with water, resulting in the loss of such fish.

ESA (Endangered Species Act) Federal legislation that provides protection for species that are in danger of extinction.

Export Water diversion from the Delta used for purposes outside the Delta.

Fish Migration Barriers Physical structures or behavioral barriers that keep fish within their migration route and prevent them from entering waters that are not desirable for them or their migration pattern.

Fish Screens Physical structures placed at water diversion facilities to keep fish from getting pulled into the facility and dying there.

Groundwater Banking Storing water in the ground for use to meet demand during dry years.
In-lieu Groundwater Banking Replaces groundwater used by irrigators with surface water to build up and save underground water supply for use during drought conditions.
HMP (Hazard Mitigation Plan) One of two standards referred to in the alternatives for levee flood protection. Following the flood disasters of the 1980s, HMP standards were established at 1 foot of freeboard above the 100-year flood event level.

In-lieu Groundwater Banking Replaces groundwater used by irrigators with surface water to build up and save underground water supply for use during drought conditions.

Inverted Siphon A pipeline that allows water to pass beneath an obstacle in the flow path. For example, an inverted siphon could be used to allow water in a canal to pass under a Delta channel.

Isolated Conveyance Facility A canal or pipeline that transports water between two different locations while keeping it separate from Delta water.

Land Fallowing/Retirement Allowing previously irrigated agricultural land to temporarily lie idle or purchasing such land and allowing it to remain out of production for a variety of purposes.

MAF An abbreviation for million acre feet.

Mining Drainage Remediation Controlling or treating polluted drainage from abandoned mines. Meander Belt Protecting and preserving land in the vicinity of a river channel in order to allow the river to meander. Meander belts are a way to allow the development of natural habitat around a river.

Non-native Species Also called introduced species; refers to plants and animals that originate elsewhere and migrate or are brought into a new area, where they may dominate the local species or in some way negatively impact the environment for native species.

Real-Time Monitoring Continuous observation in multiple locations of biological conditions on site in order to adjust water management operations to protect fish species and allow optimal operation of the water supply system.

Riparian The strip of land adjacent to a natural water course such as a river or stream. Often supports vegetation that provides the best fish habitat values when growing large enough to overhang the bank.

Riverine Habitat within or alongside a river or channel.

Setback Levee A constructed embankment to prevent flooding that is positioned some distance from the edge of the river or channel. Setback levees allow wildlife habitat to develop between the levee and the river or stream.

Shallow Water Water with little enough depth to allow for sunlight penetration, plant growth, and the development of small organisms that function as fish food. Serves as spawning areas for Delta smelt.

Smolt A young salmon that has assumed the silvery color of the adult and is ready to migrate to the sea.

Solution Principle Fundamental principles that guide the development and evaluation of Program alternatives. They provide an overall measure of acceptability of the alternatives.

State Water Project A California state water conveyance system that pumps water from the Delta for agricultural, urban domestic, and industrial purposes.

TAF An abbreviation for thousand acre feet, as in 125 TAF or 125,000 AF.

Take Limit The numbers of fish allowed to be lost or entrained at a water management facility before it must limit or cease operations. The numbers are set for different species by regulations.

Terrestrial Types of species of animal and plant wildlife that live on or grow from the land.
Water Conservation Practices that encourage consumers to reduce the use of water. The extent to which these practices actually create a savings in water depends on the total or basin-wide use of water.

Water Reclamation Practices that capture, treat and reuse water. The waste water is treated to meet health and safety standards depending on its intended use.

Water Transfers Voluntary water transactions conducted under state law and in keeping with federal regulations. The agency most involved is the State Water Resources Control Board (SWRCB).

Watershed An area that drains ultimately to a particular channel or river, usually bounded peripherally by a natural divide of some kind such as a hill, ridge, or mountain.